

WHAT IS CLAIMED IS:

- 1 1. A hybrid STM/ATM network comprising:
2 an access node to which a narrowband terminal is connected;
3 a synchronous transfer mode node which performs narrowband signal handling
4 for the narrowband terminal;
5 an ATM switch interposed between the synchronous transfer mode node and the
6 narrowband access node for transporting the narrowband signaling over an ATM
7 connection in the hybrid network.
- 1 2. The apparatus of claim 1, wherein the narrowband signaling is transported on
2 a permanent path over the ATM connection.
- 1 3. The apparatus of claim 2, wherein narrowband speech channels are
2 transported on and switched on a per call basis through the ATM switch.
- 1 4. The apparatus of claim 1, wherein:
2 the access node services at least one narrowband terminal and generates a first
3 signaling message for a call involving the at least one narrow band terminal;
4 a translator formats the first signaling message into ATM cells;
5 the synchronous transfer mode node is a circuit switch node which sets up a
6 physical connection for the call involving the at least one narrow band terminal and
7 which generates a further signaling message for the call, the further signaling message
8 pertaining to the physical connection;

9 the ATM switch switches both narrow band traffic and signaling for the call
10 involving the at least one narrow band terminal, the ATM switch serving (1) to route the
11 first signaling message to the circuit switched node and (2) to route an ATM cell-
12 formatted version of the further signaling message to another ATM switch over an
13 ATM physical interface.

1 5. The apparatus of claim 4, wherein the synchronous transfer mode node
2 provides the ATM switch with a global position number for use in setting a path
3 through the ATM switch.

1 6. The apparatus of claim 5, wherein the ATM switch translates the global
2 position number to VPI/VCI.

1 7. The apparatus of claim 5, wherein the global position number is obtained by
2 the circuit switched node by a translation from destination address information specified
3 in the first signaling message.

1 8. The apparatus of claim 4, further comprising:
2 a destination access node which serves the destination terminal, and
3 a destination translator which unpacks ATM cells carrying the ATM cell-
4 formatted version of the further signaling message.

1 9. The apparatus of claim 4, wherein the first signaling message contains
2 signaling system No. 7 information.

1 10. The apparatus of claim 4, wherein the translator is situated at the access
2 node.

1 11. The apparatus of claim 4, further comprising a ATM switch translator which
2 uses the further signaling message to prepare the ATM cell-formatted version of the
3 further signaling message.

1 12. The apparatus of claim 4, wherein the further signaling message is one of an
2 ISUP and TUP message.

1 13. The apparatus of claim 4, wherein the ATM physical interface also carries
2 ATM traffic cells between the ATM switch and the another ATM switch.

1 14. The apparatus of claim 4, wherein the ATM switch is provided in a node
2 which is distinct from the circuit switch node.

1 15. A method of operating a hybrid STM/ATM network, the method
2 comprising:
3 performing narrowband signal handling for a narrowband terminal at a
4 synchronous transfer mode node;
5 transporting the narrowband signaling over an ATM connection in the hybrid
6 network.

1 16. The method of claim 15, further comprising transporting the narrowband
2 signaling on a permanent path over the ATM connection.

1 17. The method of claim 15, further comprising transporting an switching
2 narrowband speech channels on a per call basis through an ATM switch.

1 18. The method of claim 15, further comprising:
2 generating a first signaling message for a call involving the narrowband terminal;
3 formatting the first signaling message into ATM cells and routing the ATM cells
4 carrying the first signaling message through an ATM switch to the circuit switch node;

5 generating, at the circuit switch node and in response to the first signaling
6 message, a further signaling message pertaining to a physical connection for the call
7 involving the at least one narrow band terminal;
8 using the ATM switch to route an ATM cell-formatted version of the further
9 signaling message for the call to another ATM switch over an ATM physical interface.

1 19. The method of claim 18, further comprising:
2 obtaining at the circuit switch node a global position number;
3 communicating the global position number to the ATM switch for setting a path
4 through the ATM switch for the further signaling message.

1 20. The method of claim 19, further comprising translating, at the ATM switch,
2 the global position number to VPI/VCI for setting a path through the ATM switch for
3 the further signaling message.

1 21. The method of claim 19, further comprising obtaining the global position
2 number at the circuit switched node by a translation from destination address
3 information specified in the first signaling message.

1 22. The method of claim 19, further comprising:
2 routing the further signaling message to a destination access node which serves
3 the destination terminal, and
4 unpacking, at a destination translator of destination access node, the ATM cells
5 carrying the ATM cell-formatted version of the further signaling message.

1 23. The method of claim 18, wherein the first signaling message contains
2 signaling system No. 7 information.

1 24. The method of claim 18, further comprising situating the translator at the
2 access node.

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1 25. The method of claim 18, further comprising using a translator at the ATM
2 switch to prepare the ATM cell-formatted version of the further signaling message.

1 26. The method of claim 18, wherein the further signaling message is one of an
2 ISUP and TUP message.

1 27. The method of claim 18, further comprising including the ATM cell-
2 formatted version of the further signaling message in a stream of ATM traffic cells
3 carried on the ATM physical interface.

1 28. The method of claim 18, further comprising providing the ATM switch at a
2 node which is distinct from the circuit switched node.

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